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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,532	03/31/2004	Yonosuke Aoki	IKW-007	9913

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LAHIVE & COCKFIELD
28 STATE STREET
BOSTON, MA 02109

EXAMINER

LOPEZ, MICHELLE

ART UNIT	PAPER NUMBER
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3721

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/816,532	AOKI, YONOSUKE	
	Examiner	Art Unit	
	Michelle Lopez	3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/31/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2, 4, and 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, it is not clear how does a fluctuating pressure is released to the outside of the power tool under unloaded driving conditions, since under unloaded driving conditions a load, which creates the fluctuating pressure, is not applied.

In claim 10, it is not clear what is meant by "a time delay".

The recitations in the following claims lack antecedent basis: in claim 2: "the axial direction" in line 12, "the fluctuating pressure", "the crank chamber", and "the direction" in line 17; in claim 4, "both sides"; in claim 6: "the workpiece", "the crank chamber", and "the axial direction of the hammer bit"; in claim 7: "the axial direction" and "the circumferential surface"; in claim 8: "the axial direction" in line 16; in claim 9: "the action of the air spring function".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Settles (2,875,731). Settles discloses the invention substantially as claimed including a tool bit 19, an actuating mechanism that drives the tool bit linearly by means of pressure fluctuations so as to cause the tool bit to perform a predetermined operation, and a dynamic vibration reducer having a weight 21 that reciprocates under a biasing force of an elastic element to reduce vibration of the actuating mechanism, the weight being driven by means of pressure fluctuations caused in the actuating mechanism as shown in col. 1; 15-21.

With respect to claim 3, as the weight 21 is being driven by pressure fluctuations created when the power tool is being operated, it is deemed that the weight 21 is prevented from being driven when the power tool is not being operated.

3. Claims 1, 3-5 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Weilenmann (4,478,293). Weilenmann discloses the invention substantially as claimed including a tool bit 4, an actuating mechanism that drives the tool bit linearly by means of pressure fluctuations so as to cause the tool bit to perform a predetermined operation, and a dynamic vibration reducer 11 having a weight 12 that reciprocates under a biasing force of an elastic element 13 to reduce vibration of the actuating mechanism, the weight being driven by means of pressure fluctuations caused in the actuating mechanism.

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Also, with respect to claims 3-5, as the weight 12 is being driven by pressure fluctuations created when the power tool is being operated, it is deemed that the weight 12 is prevented from being driven when the power tool is not being operated. Also, Weilenmann discloses wherein the dynamic vibration reducer includes a first actuating chamber and a second actuating chamber at the vicinity of 14,15, wherein the second actuating chamber can communicate with the outside via 11b,11c as shown in Fig. 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 6-10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weilenmann (4,478,293) in view of Fehrle (4,567,951).

Weilenmann discloses the invention substantially as claimed including an actuating mechanism that drives a tool bit linearly by pressure fluctuations and a vibration reducer having a cylindrical body 11 that houses a weight 12, wherein a fluctuating pressure caused by the actuating mechanism is introduced into the body of the dynamic vibration reducer so that the weight is driven in a direction opposite to a reciprocating direction of a spindle, but does not specifically disclose the particular of the actuating mechanism. However, Fehrle discloses an actuating mechanism as claimed including a driving motor 8, a striker 23 that reciprocates in an axial direction of a tool bit so as to cause the tool bit to linearly move and a crank mechanism with a crank chamber that drives the striker by converting a rotating output of the driving motor

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to linear motion in the axial direction of a hammer bit for the purpose of providing an air cushion percussion mechanism. In view of Fehrle, it would have been obvious to one having ordinary skill in the art to have provided Weilenmann's invention with the particular of the actuating mechanism, as disclosed above, in order to provide an air cushion percussion mechanism.

With respect to claims 6-7, Fehrle also teaches a piston cylinder mechanism 21 driven by the crank mechanism and a striker 23, wherein the piston cylinder creates an air spring which causes the striker to reciprocates in an axial direction of the hammer bit (claim 6); a piston 35 and a cylinder 21 that slide relative to each other in the axial direction of the tool bit (claim 7).

With respect to claims 8 and 14, Weilenmann discloses the invention substantially as claimed including a weight that reciprocates in a direction opposite to a direction of reciprocation of a tool holder, but does not specifically discloses a crank chamber and a cylinder that can move between a first position near the tool holder and a second position remote to the tool holder due pressure fluctuations created on the crank chamber. However, Fehrle teaches a cylinder 21 that can move between a first position near the tool holder and a second position remote to the tool holder and a crank chamber generating pressure fluctuations for the purpose of providing an air cushion percussion mechanism. In view of Fehrle, it would have been obvious to one having ordinary skill in the art to have provided Weilenmann's inventions with such a cylinder and a crank chamber in order to provide an air cushion percussion mechanism, wherein pressure fluctuations created at the crank chamber will allow Weilenmann's weight to be driven.

With respect to claims 9-10, Fehrle also teaches an air spring chamber causing a striker 23 to reciprocate and an air vent 51.

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5. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weilenmann (4,478,293) in view of Fehrle (4,567,951), and further in view of Berger 6,913,088.

Weilenmann discloses the invention as claimed including a dynamic vibration reducer with a weight being driven by pressure fluctuations, and Fehrle teaches the concept of a power tool with a cylinder with an air vent that can communicate a crank chamber with the outside of the tool wherein the cylinder moves between a first and a second position creating pressure fluctuations within the tool, but Weilenmann as modified by Fehrle does not specifically disclose wherein when the cylinder moves to the second position, the air vent is closed so as to allow the weight to be driven, and when the cylinder moves to the first position, the air vent is opened so as to prevent the weight to be driven. However, Berger teaches a cylinder moving to a second position, wherein an air vent is closed and moving to a first position wherein the air vent is opened as shown in col. 6; 55-67 and col. 7; 1-10 for the purpose of providing a spring system as a component of an apparatus for damping the vibrations on the tool handle. Therefore, in view of Berger, it would have been obvious to one having ordinary skill in the art to have provided Weilenmann's invention as modified by Fehrle, and further having a cylinder moving to a second position, wherein an air vent is closed and moving to a first position wherein the air vent is opened, wherein in Weilenmann's invention as modified by Fehrle the weight would be capable of being driven by pressure fluctuations created by such cylinder air vent in communication with the crank chamber.

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Conclusion

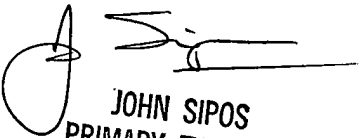
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Widmer, Manschitz, Ziegler, Kristen, and Ikuta are cited to show related inventions. Also US application'001 to Ikuta was considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML


JOHN SIPOS
PRIMARY EXAMINER